REMARKS

Claims 1-9 have been amended. Claim 10 has been added. No new matter has been added. Claims 1-10 are pending.

Disclaimers Relating to Claim Interpretation and Prosecution History Estoppel

Claims 1-9 and have been amended, notwithstanding the belief that these claims were allowable. Except as specifically admitted below, no claim elements have been narrowed. Rather, cosmetic amendments have been made to the claims and to broaden them in view of the cited art. Claims 1-9 have been amended solely for the purpose of expediting the patent application process, and the amendments were not necessary for patentability.

Any reference herein to "the invention" is intended to refer to the specific claim or claims being addressed herein. The claims of this Application are intended to stand on their own and are not to be read in light of the prosecution history of any related or unrelated patent or patent application. Furthermore, no arguments in any prosecution history relate to any claim in this Application, except for arguments specifically directed to the claim.

Interview Summary

The Examiner is thanked for the in-person interview of February 23, 2006. The discussions during the interview were directed to a proposed amendment by the Applicant. The Examiner explained that the amendment needs to be supported by the specification.

Claim Objections

The Examiner objected to claim 1. The Examiner pointed to the following informalities: (1) "chargeable charger" should be corrected; (2) "Chargeable charger" information" lacks antecedence. As amended, the term "chargeable charger" is no longer recited in claim 1.

Claim Rejections - 35 USC § 112

The Examiner rejected claims 1-9 under 35 USC § 112, second paragraph as indefinite.

The Examiner asserted that the use of "or" throughout the claims make the claim language confusing because it is not clear what applicant is actually claiming. As amended, the term "or" is no longer used in the body of claims 1-9.

Claim 1: The Examiner asserted that "battery management information is at least either available device information on a device" should be clarified. The Examiner assumed that the batteries provide battery-state data via a bus to a host computer included in a device. As amended, the term which the Examiner found ambiguous has been deleted.

Claim 2: The Examiner asserted that "discharged device history information" is incorrect since the discharging battery powers the device. The Examiner assumed that the battery provides charge/discharge current information. As amended, the term which the Examiner found ambiguous has been deleted.

Claim 6: The Examiner asserted that "discharged device history information" should be clarified. The Examiner assumed the device may communicate with the battery and request information from the battery for use in the system power management scheme, thereby providing the user of the host device with information about the battery's present state and capabilities. As amended, the term which the Examiner found ambiguous has been deleted.

The Examiner required Applicant to revise all of the claims completely, and not just correct the indefinite and functional or operational language mentioned. Per the Examiner's request, the claims have been appropriately amended.

The serial-parallel converter 120 and the serial-parallel converter 420 are connected via the two-way serial bus 500 as shown in FIG. 2. In view of a person of ordinary skill in the art, the serial-parallel converter 120 serial-parallel converts and parallel-serial converts data.

Claim Rejections - 35 USC § 102

The Examiner rejected claim 1 under 35 USC § 102(b) as anticipated by Shyr et al. (USP 5,903,764) and Smart Battery Data Specification (http://www.sbs-forum.org/specs/sbdat110.pdf). This rejection is respectfully traversed.

Shyr is directed to a power selector having a controller and switch drivers. The controller directs the switch drivers based on information provided by smart batteries. The controller includes a bus-snooper circuit which awaits a low capacity alarm message. If the bus-snooper circuit observes a low capacity alarm message from a given smart battery, the controller directs switch drivers to prevent power discharge from the given smart battery. The controller also directs the switch drivers to charge only one smart battery at a given time.

To anticipate a claim, the reference must teach each and every element of the claim. MPEP § 2131 provides:

> A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. [. . .] The identical invention must be shown in as complete detail as is contained in the ... claim.

Claim 1 recites, among other features:

> a serial-parallel conversion circuit both for converting serial data of the information received from the outside into parallel data for storing in the storage section, and for converting parallel data of the information read out from the storage section into serial data for transmitting to the outside
>
> a communication control circuit for controlling storing the parallel data in the storage section and reading out the parallel data from the storage section.

The cited references do not disclose both the serial-parallel conversion circuit and the communication control circuit disposed within the battery. The serial-parallel conversion circuit and the communication circuit effectively control the performance of the storage section between the

serial-parallel conversion circuit and the storage section. By including this circuitry within the battery, complicated control from outside the battery is eliminated.

Because neither Shyr nor the secondary reference, Smart Battery Charger Specification, describe both the serial-parallel conversion circuit and the communication control circuit disposed within the battery, the §102(b) rejection should be withdrawn.

Claim Rejections - 35 USC § 102

The Examiner rejected claims 2-5 under 35 USC § 102(b) as anticipated by Shyr et al. (USP 5,903,764) and Smart Battery Data Specification (http://www.sbs-forum.org/specs/sbc100.pdf). This rejection is respectfully traversed.

By virtue of their dependence from claim 1, claims 2-5 are not anticipated by Shyr. Therefore, the § 102(b) rejection should be withdrawn.

Claim 3:

Claim 3 recites, among other features, "the information related to a device operable with the battery, the information for identifying the device." The Examiner asserted that Shyr discloses a "smart" battery that provides battery-state data to a device. Shyr, at 2:10-13, identifies the battery-state data as "the battery's chemistry, or the battery's operating temperature, voltage or charge or discharge current." Shyr's battery-state data is not the identification information recited in claim 3.

The Examiner further asserted that the secondary reference discloses that the battery communicates factual data such as "battery identification data, temperature, voltage, charge/discharge current and existing state of charge" to a device. The Examiner's characterization of the secondary reference is accurate. However, the secondary reference's battery identification data is not the identification information related to a device operable with the battery as recited in claim 3.

Because neither Shyr nor the secondary reference, Smart Battery Charger Specification, teach storing, in a battery, identification information related to a device operable with the battery, the §102(b) rejection for claim 3 should be withdrawn.

Claim 4:

Claim 4 recites, among other features, "the information related to a charger able to charge the battery, the information for identifying the charger." Nothing in Shyr teaches this feature.

The Examiner asserted that the secondary reference, Smart Battery Charger Specification, discloses that the battery "tells the charger how to adjust the charging cycle based on its current state of discharge, current temperature, charge/discharge cycle count to date, and other relevant data." Although the secondary reference discloses battery-state information, the secondary reference's battery-state information does not teach identification information related to a charger which is able to charge the battery.

Because neither Shyr nor the secondary reference, Smart Battery Charger Specification, teach storing, in a battery, identification information related to a charger which is able to charge the battery, the §102(b) rejection should be withdrawn.

Claim 5:

Claim 5 recites, among other features, "the information related to an inherent discharge characteristic of the battery." Neither Shyr's nor the secondary reference's battery-state information teach storing, in a battery, information related to an inherent discharge characteristic of the battery. Therefore, the §102(b) rejection should be withdrawn.

Claim Rejections - 35 USC § 102

The Examiner rejected claims 6-9 under 35 USC § 102(b) as anticipated by Hull et al. (USP 5,606,242). This rejection is respectfully traversed.

Hull is directed to a processor which calculates appropriate charge parameters based on the battery's voltage, current, and temperature, an algorithm and an estimated remaining battery capacity (see Hull, 5:46-56).

Claims 6-9 are dependent from claim 1. Therefore, claims 6-9 include the features: both the serial-parallel conversion circuit and the communication control circuit disposed within the battery. Because Hull does not disclose both the serial-parallel conversion circuit and the communication control circuit disposed within the battery, the §102(b) rejection should be withdrawn.

Claim 6 recites, among other features, "the information related to an inherent charge characteristic of the battery." The Examiner asserted that Hull's abstract teaches the battery communicating "information about the battery's present state and capabilities." The Examiner's characterization of Hull is accurate. However, Hull's battery present state and capability information is not the information related to an inherent charge characteristic of claim 6. Therefore the §102(b) rejection should be withdrawn.

Claim 7 recites, among other features, "the information related to an identification of a device that discharged the battery." Claim 8 recites, among other features, "the information related to an identification of a charger that charged the battery." Claim 9 recites, among other features, "information for identifying a type of said battery." The argument set forth for claim 6 is applicable to claims 7, 8 and 9. Therefore, the §102(b) rejection should be withdrawn for claims 7, 8 and 9.

Conclusion

It is submitted, however, that the independent and dependent claims include other significant and substantial recitations which are not disclosed in the cited references. Thus, the claims are also

patentable for additional reasons. However, for economy the additional grounds for patentability are not set forth here.

In view of all of the above, it is respectfully submitted that the present application is now in condition for allowance. Reconsideration and reexamination are respectfully requested and allowance at an early date is solicited.

The Examiner is invited to call the undersigned attorney to answer any questions or to discuss steps necessary for placing the application in condition for allowance.

Respectfully submitted,

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